

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A digital camera for acquiring image data by acquiring a subject image, comprising:

an imaging device configured to acquire said subject image[[,]]; and

a piezoelectric element configured to displace said imaging device[[,]] wherein;

a comparing unit configured to compare a reference voltage corresponding to a predetermined amount of displacement of the imaging device with a piezoelectric element voltage and to provide an output indicating that the piezoelectric element voltage is less than the reference voltage;

a charging unit including at least one energy accumulating unit is configured to power a strobe unit is used as an electric power supply source for; and

a control element configured to supply electricity from the energy accumulating unit of the charging unit to the piezoelectric element to raise said piezoelectric element voltage responsive to the comparing unit providing the output indicating that the piezoelectric element voltage is less than the reference voltage.

Claim 2 (Currently Amended): The digital camera according to claim 1, wherein said energy accumulating unit includes a main capacitor ~~for strobe unit emission provided inside or outside, and said piezoelectric element is charged by the energy accumulated in said main capacitor.~~

Claim 3 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to capture a subject image[[,]]; and

a piezoelectric element configured to displace said imaging device[[,]];;

a switching unit configured to enable a charging unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit to provide for strobe unit emission provided inside or outside or to enable discharge of said piezoelectric element[[,]];;

a comparing unit in the charging unit configured to compare a reference voltage corresponding to a predetermined amount of displacement of the imaging device with a piezoelectric element voltage and to provide an output indicating that the piezoelectric element voltage is less than the reference voltage; and

a control unit configured to control said switching unit to enable the charging unit including the comparing unit to enable ~~for controlling the charging and discharging sequence of said piezoelectric element[[,]] wherein by the energy accumulated in the at least one main capacitor in response to the output of said control~~ comparing unit controls capturing in a first image by charging said piezoelectric element in mode including a state of displacing said imaging device[[,]] and capturing by the piezoelectric element or to control said switching unit to enable the discharge of said piezoelectric element in a second image by discharging said piezoelectric element in a state before mode including no displacement of said imaging device by the piezoelectric element.

Claim 4 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to acquire a subject image[[,]];;

a piezoelectric element configured to displace said imaging device[[,]];;

a switching unit configured to enable a charging unit including a charge adjusting circuit to perform a charging operation to charge said piezoelectric element to a specified

value of charge voltage by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit to provide for strobe unit emission provided inside or outside or to enable discharge of any charge voltage on said piezoelectric element[[,]]; and

a control unit configured to control said switching unit to switch the charging unit including the charge adjusting circuit into a first state to provide for controlling the charging and discharging sequence operation of said piezoelectric element[[,]] with image device displacement in a first imaging mode or to switch the charging unit including the charge adjusting circuit into a second state to provide a discharging operation to insure no displacement of said piezoelectric element in a second imaging mode,

wherein said ~~switching unit includes~~ a charge adjusting circuit includes a comparator portion configured to compare a reference voltage corresponding to a predetermined amount of displacement of the imaging device with a piezoelectric element voltage and to provide a first output indicating that the piezoelectric element voltage is less than the reference voltage or a second output indicating that the piezoelectric element voltage is equal to or greater than the reference voltage and the charging unit including the charge adjusting circuit provides the charging operation in response to the first output, stops the for stopping charging operation when in response to the charged voltage in said piezoelectric element becomes a specified value second output to hold the charged voltage, and restarting restarts the charging operation when the first output is again provided charged voltage in said piezoelectric element becomes lower than a specified value, and

said control unit is configured to control acquiring a first image ~~by during charging said piezoelectric element in a state of displacing said first imaging mode device, and capturing a second image by discharging said piezoelectric element in a state before displacement during said second imaging mode of said imaging device.~~

Claim 5 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to capture a subject image[[,]];

a piezoelectric element configured to displace said imaging device[[,]];

a switching unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit to provide for strobe unit emission ~~provided inside or outside~~ or to discharge said piezoelectric element[[,]]; and

a control unit configured to control said switching unit to provide for controlling a charging and discharging sequence operation of said piezoelectric element[[,]] with image device displacement in a first imaging mode or to provide a discharging operation to insure no displacement of said piezoelectric element in a second imaging mode,

wherein said switching unit includes a charging switch circuit configured to turn for turning on or off charging of said piezoelectric element by the energy accumulated in at least one main capacitor during said charging operation, a discharging switch circuit configured to turn for turning on or off discharging of said piezoelectric element, a detecting circuit configured to detect for detecting the charged voltage in on said piezoelectric element, and comparing circuit for comparing configured to make a comparison of the charged voltage in on said piezoelectric element detected by said detecting circuit and a reference voltage, said charging switch circuit configured to turn turns on ~~or off~~ charging of said piezoelectric element ~~on the basis of the result of when the comparison by said comparing circuit indicates that the piezoelectric element voltage is less than the reference voltage,~~ and

said control unit is configured to control acquiring a first image by during charging ~~said piezoelectric element in a state of displacing said first imaging mode device,~~ and take

capturing a second image by discharging said piezoelectric element in a state before displacement during said second imaging mode of said imaging device.

Claim 6 (Currently Amended): A digital camera capable of taking an image by shifting pixels, comprising:

an imaging device configured to capture a subject image[[,]];

a piezoelectric element configured to displace said imaging device[[,]];

a switching unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit to provide for strobe unit emission ~~provided inside or outside~~ or to discharge said piezoelectric element[[,]]; and

a control unit configured to control said switching unit to provide ~~for controlling~~ a charging ~~and discharging sequence operation~~ of said piezoelectric element[[,]] with image device displacement in a first imaging mode or to provide a discharging operation to insure no displacement of said piezoelectric element in a second imaging mode,

wherein said switching unit includes a comparator portion configured to compare a reference voltage corresponding to a predetermined amount of displacement of the imaging device with a piezoelectric element voltage and to provide an output indicating that the piezoelectric element voltage is less than the reference voltage and the switching unit responding to the output to charge said piezoelectric element by the energy accumulated in the at least one main capacitor during the charging operation ~~control unit is configured to stop the charging operation when said piezoelectric element reaches a specified voltage, and to acquire a first image by charging said piezoelectric element in a state of displacing said imaging device, and to acquire a second image by discharging said piezoelectric element in a state before displacement of said imaging device.~~

Claim 7 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to capture a subject image[[,]];

a piezoelectric element configured to displace said imaging device[[,]];

a switching unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit to provide for strobe unit emission ~~provided inside or outside~~ or to discharge said piezoelectric element[[,]]; and

a control unit configured to control said switching unit to provide for controlling a charging and discharging sequence operation of said piezoelectric element[[,]] ~~and also to stop the charging when said piezoelectric element reaches a specified voltage[[,]]~~ with image device displacement in a first imaging mode or to provide a discharging operation to insure no displacement of said piezoelectric element in a second imaging mode[[,]];

~~wherein said switching unit includes a charging switch circuit~~ configured to turn for turning on or off charging of said piezoelectric element by the energy accumulated in the at least one main capacitor during said charging operation[[,]];

a discharging switch circuit configured to turn for turning on or off discharging of said piezoelectric element[[,]]; and

a detecting circuit configured to detect for detecting the charged voltage in on said piezoelectric element[[,]];

a comparing unit configured to make a comparison of the voltage on said piezoelectric element detected by said detecting circuit and a reference voltage indicating a displacement of the imaging device,

wherein said charging switch circuit is configured to turn on charging of said piezoelectric element when the comparison indicates that the piezoelectric element voltage is less than the reference voltage during the charging operation, and said control unit is configured to control turning on or off said charging switch circuit based on the detected voltage of the detecting circuit, and to acquire a first image by charging said piezoelectric element in a state of displacing said imaging device, and to acquire a second image by discharging said piezoelectric element in a state before displacement of said imaging device.

Claim 8 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to capture a subject image[[,]];

a piezoelectric element configured to displace said imaging device[[,]];

a switching unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit to provide for strobe unit emission ~~provided inside or outside~~ or to discharge said piezoelectric element[[,]]; and

a control unit configured to control said switching unit to provide for controlling a charging and discharging sequence operation of said piezoelectric element[[,]] ~~and also to stop the charging when said piezoelectric element reaches a specified voltage[[,]]~~ with image device displacement in a first imaging mode or to provide a discharging operation to insure no displacement of said piezoelectric element in a second imaging mode,

wherein said switching unit includes a comparator configured to compare a reference voltage corresponding to a predetermined amount of displacement of the imaging device with a piezoelectric element voltage and to provide an output indicating that the piezoelectric element voltage is less than the reference voltage and the switching unit responding to the

output to charge said piezoelectric element by the energy accumulated in the at least one main capacitor during the charging operation ~~control unit is configured to control acquiring a first image in a state not displacing said imaging device, and to acquire a second image by charging said piezoelectric element in a state of displacing said imaging device.~~

Claim 9 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to acquire a subject image[[],];

a piezoelectric element configured to displace said imaging device[[],];

a switching unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit for strobe unit emission, and

a control unit configured to control said switching unit to provide for controlling a charging operation and discharging sequence to provide image displacement in an imaging mode of said piezoelectric element,

wherein said switching unit includes a charge adjusting circuit including a for stopping the charging operation when the charged comparator portion configured to compare a voltage in on said piezoelectric element becomes a first specified to a reference voltage value indicating a predetermined amount of displacement of the imaging device and to hold the charged voltage, and for restarting charging when the charged voltage in on said piezoelectric element becomes lower than a second specified the reference voltage value, and said adjusting circuit triggers the switching unit to charge ~~control unit is configured to control acquiring a first image in a state not displacing said imaging device, and to acquire a second image by charging said piezoelectric element in a state of displacing said imaging device.~~

Claim 10 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to acquire a subject image[[,]];

a piezoelectric element configured to displace said imaging device[[,]];

a switching unit configured to discharge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit for strobe unit emission provided ~~inside or outside~~ or to discharge said piezoelectric element[[,]]
and;

a control unit configured to control said switching unit to provide ~~for controlling~~ a charging operation and to provide a discharging sequence operation of said piezoelectric element,

wherein said switching unit includes a charging switch circuit ~~for turning~~ configured to turn on or off charging of said piezoelectric element, a discharging switch circuit ~~for turning~~ configured to turn on or off discharging of said piezoelectric element, a detecting circuit for detecting the ~~charged~~ voltage ~~in on~~ said piezoelectric element, and a comparing circuit ~~for comparing~~ configured to compare the ~~charged~~ voltage ~~in on~~ said piezoelectric element detected by said detecting circuit and a reference voltage indicating displacement of the piezoelectric element,

wherein said charging switch circuit ~~turns~~ is configured to turn on ~~or off~~ charging of said piezoelectric element ~~on~~ based on the comparison by said comparing circuit indicating the piezoelectric element voltage is less than the reference voltage, and said control unit is configured to control acquiring a first image in a state not displacing said imaging device, and acquiring a second image ~~by~~ in a state of charging said piezoelectric element ~~in a state of~~ displacing so as to displace said imaging device.

Claim 11 (Currently Amended): A digital camera capable of acquiring an image by shifting pixels, comprising:

an imaging device configured to acquire a subject image[[,]];
a piezoelectric element configured to displace said imaging device[[,]];
a switching unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit for strobe unit emission provided inside or outside, or to discharge said piezoelectric element[[,]]; and

a control unit configured to control said switching unit for controlling a charging and discharging sequence operation of said piezoelectric element,

wherein said ~~control unit is configured to control stopping the charging when~~
switching unit includes a comparing unit configured to compare a voltage on the piezoelectric element to a reference voltage indicating displacement of the imaging device, the comparing unit being configured to provide an output during the changing operation to control the switching unit to charge said piezoelectric element by the energy accumulate in the main capacitor reaches a specified voltage, and to acquire a first image in a state not displacing said imaging device, and to acquire a second image by charging said piezoelectric element in a state of displacing said imaging device.

Claim 12 (Currently Amended): A digital camera capable of taking an image by shifting pixels, comprising:

an imaging device configured to capture a subject image[[,]];
a piezoelectric element configured to displace said imaging device[[,]];
a switching unit configured to charge said piezoelectric element by the energy accumulated in at least one main capacitor configured to supply energy to a strobe unit to

provide for strobe unit emission ~~provided inside or outside~~ or to discharge said piezoelectric element[[,]]; and

a control unit configured to control said switching unit to provide ~~for controlling~~ a charging ~~and discharging sequence~~ operation of said piezoelectric element[[,]] ~~and also to stop the charging when said piezoelectric element reaches a specified voltage[[,]]~~ with image device displacement in a first imaging mode or to provide a discharging operation to insure no displacement of said piezoelectric element in a second imaging mode,

wherein said wherein said switching unit includes a charging switch circuit configured to turn ~~for turning on or off~~ charging of said piezoelectric element by the energy accumulated in the at least one main capacitor during said charging operation[[,]] ~~[[a]]~~ ~~discharging switch circuit for turning on or off discharging of said piezoelectric element[[,]]~~ and a detecting circuit configured to detect ~~for detecting~~ the charged voltage ~~in on~~ said piezoelectric element, the switching unit further including a comparing unit configured to make a comparison of the voltage on said piezoelectric element detected by said detecting circuit and a reference voltage, said charging switch circuit configured to turn on charging of said piezoelectric element when the comparison indicates that the piezoelectric element voltage is less than the reference voltage during the charging operation[[,]] ~~and said control unit is configured to control turning on or off said charging switch circuit based on the detected voltage of the detecting circuit, and to acquire a first image in a state not displacing said imaging device, and to acquire a second image by charging said piezoelectric element in a state of displacing said imaging device.~~